KARNATAKA TEST HOUSE PVT LTD.

MATERIAL TESTING LABORATORY

NABL Accredited Laboratory as per ISO/IEC 17025

Report No. : KTH/F.AGG/1770-2967/2013-2014 **Date: 23.11.2013**

TEST REPORT ON AGGREGATE
(Fine Aggregate)

Name of the Customer* : **The Assistant Executive Engineer,**
Shettyhalli Sub Division,
BBMP, Bangalore.

Name of the Project* : Providing Street name board at Ravindranagara & Mallasandra in Ward No.13, In Shettyhalli Sub Division.

Name of Contractor* : Mr.Shivakumar N M, Bangalore.

Source of Sample : Supplied by the Customer.

Sample Received on : 19.11.2013.

Technical Reference : IS : 2386 Part I to VIII– 1963 (Reaffirmed-2002), IS : 383 – 1970.

Sieve Analysis of Fine Aggregate (River Sand)

Sl. No.	Sieve size mm	% Passing	IS : 383 – 1970 Specification				Remarks
			% passing for Zone I	% passing for Zone II	% passing for Zone III	% Passing for Zone IV	
1	10	100	100	100	100	100	Falls in Zone –II as per table 4 of IS-383 – 1970.
2	4.75	93.8	90 – 100	90 – 100	90 – 100	95 - 100	
3	2.36	88.9	60 – 95	75 – 100	85 – 100	95 - 100	
4	1.18	62.8	30 – 70	55 – 90	75 – 100	90 - 100	
5	0.600	45.3	15 – 34	35 – 59	60 – 79	80 - 100	
6	0.300	10.2	5 – 20	8 – 30	12 – 40	15 to 50	
7	0.150	1.4	0 – 10	0 – 10	0 – 10	0 to 15	

Sl. No.	Test Conducted	Results	IS : 383 – 1970 Stipulations
1.	Silt Content (%)	2.10	-

* As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C)
TECHNICAL MANAGER

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778/44, Gokul 1st Stage, 2nd Phase, 8th Cross, Triveni Road, Yeshwanthpur, Bangalore - 560 054.
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Report No. : KTH/C.AGG/1770-2966/2013-2014 **Date: 23.11.2013**

TEST REPORT ON AGGREGATE
(Coarse Aggregate)

Name of the Customer* : **The Assistant Executive Engineer,**
Shettyhalli Sub Division,
BBMP, Bangalore.

Name of the Project* : Providing Street name board at Ravindranagara & Mallasandra in Ward No.13, in Shettyhalli Sub Division.

Name of Contractor* : Mr.Shivakumar N M, Bangalore.

Source of Sample : Supplied by the Customer.

Sample Received on : 19.11.2013.

Technical Reference : IS : 2386 Part I to VIII– 1963 (Reaffirmed-2002), IS : 383 – 1970.

Sieve Analysis of Coarse Aggregate - 40mm & down size

Sl. No.	Sieve size mm	% Passing	IS : 383-1970 Stipulations		Remarks
			Single Size	Graded Size	
1	63	100	100	100	Sample confirms to Single Size of IS: Stipulation for 40mm size Aggregate Fails for Graded Stipulation
2	40	85.3	85 to 100	95 to 100	
3	20	15.4	0 to 20	30 to 70	
4	12.5	2.6	0 to 20	-	
5	10	-	0 to 5	10 to 35	
6	4.75	-	-	0 to 5	

Sl. No.	Test Conducted	Identification mm	Results	IS : 383 – 1970 Stipulations
1	Flakiness Index (%)	40	8.40	Not specified
2	Elongation Index (%)	40	13.50	Not specified
3	Impact Value (%)	40	24.01	Shall not be more than 45% for Concrete and 30% for Wearing surfaces, such as runways, roads and pavements.

* As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C.)
TECHNICAL MANAGER

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NABL Accredited Lab Certificate No.T-0901

Report No. : KTH/ST/1770-269/2013-2014 **Date: 24.11.2013**

TEST REPORT ON STEEL BARS

Name of the Customer*	:	**The Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Name of the Project*	:	Providing Street name board at Ravindranagara & Mallasandra in Ward No.13, in Shettyhalli Sub Division.
Name of Contractor*	:	Mr.Shivakumar N M, Bangalore.
Source of Sample	:	Supplied by the Customer.
Sample Received on	:	19.11.2013.
Nature of Sample*	:	Reinforcement steel – 10mm & 12mm.
Technical Reference	:	Tensile IS: 1786 – 2008 & IS: 1608–1995 (Reaffirmed–2000) Bend & Re-bend IS: 1786 – 2008 & IS: 1599 - 1985 (Reaffirmed–2000)
Grade of Steel*	:	Fe-500

TENSILE TEST:

Dia (mm)	10	12	Limits as per IS : 1786-2008, Gr. Fe 500
Weight / unit length (kg/m)	0.595	0.874	10mm – 0.574 Min 12mm – 0.844 Min
0.2% proof Stress (N/mm^2)	509.55	548.48	500 Min
Tensile Strength (N/mm^2)	611.46	645.79	8% More than actual 0.2% proof stress but not less than 545 N/mm^2
% Elongation (on 5.65 $\sqrt{A}$G.L)	22.0	21.7	12.0 Min.

BEND TEST:

Sl. No.	*Dia (mm)*	*Mandrel diameter*	*Observations*
1.	10	4 dia	No cracks observed. Passes the test.
2.	12	4 dia	No cracks observed. Passes the test.

REBEND TEST:

Sl. No.	*Dia (mm)*	*Mandrel diameter*	*Observations*
1.	10	5 dia	No cracks observed. Passes the test
2.	12	7 dia	No cracks observed. Passes the test.

* As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C.)
TECHNICAL MANAGER

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NABL Accredited Lab Certificate No.T-0901

Report No. : KTH/CEMENT/1770-2968/2013-2014 **Date: 28.11.2013**

PHYSICAL TEST REPORT ON CEMENT

Interim 3 & 7 days

Name of the Customer* : **The Assistant Executive Engineer,**
Shettyhalli Sub Division,
BBMP, Bangalore.

Name of the Project* : Providing Street name board at Ravindranagara & Mallasandra in Ward No.13, in Shettyhalli Sub Division.

Name of Contractor* : Mr.Shivakumar N M, Bangalore.

Source of Sample : Supplied by the Customer.

Type of cement* : Ordinary Portland Cement (OPC)

Brand of cement* : Birla Super 53 Grade.

Sample Received on : 19.11.2013.

Period of test : 21.11.2013 to 28.11.2013.

Technical Reference : IS: 4031(Part I–VI) 1988 (Reaffirmed–2000) & IS: 12269-1987.

Sl. No.	Test Conducted	Results	IS : 12269-1987 Stipulation	Remarks
1	Normal consistency	27.25 %	Not specified	-
2	Initial setting time	133 minutes	Shall not be less than 30 minutes	P
3	Final setting time	208 minutes	Shall not be more than 600 minutes	P
4	Compressive strength (Average of three results) a. 72 ± 1h (3 days) b.168 ± 2h (7 days) c. 672 ± 4h (28 days)	 29.56 MPa 40.92 MPa T.T.C	 Shall not be less than 27.0 MPa Shall not be less than 37.0 MPa Shall not be less than 53.0 MPa	 P P -
5	Fineness (By Blaine's air permeability method)	316.82 m^2/kg	Shall not be less than 225m 2/kg	P
6	Soundness (Le-chatlier's method)	0.79 mm	Shall not be more than 10 mm	P

P: Passes IS requirement F: Fails IS requirement T.T.C: Test To be Conducted.

* As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C.)
TECHNICAL MANAGER

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Report No. : KTH/CT/1770-2970/2013-2014 **Date: 22.11.2013**

TEST REPORT ON CONCRETE CUBES

To,

The Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.

Name of the Project* : Providing Street name board at Ravindranagara & Mallasandra in Ward No.13, in Shettyhalli Sub Division.

Name of the Contractor* : Mr.Shivakumar N M, Bangalore.

Sample Received on : 19.11.2013

Compressive Strength test as per IS: 516-1959 (Reaffirmed 1999) has been conducted on the concrete cube specimens, supplied by the Customer and the results are tabulated here below:

Dimension of Specimen: 150mmx150mmx150mm

Sl. No	*Cubes pertaining to the concrete cast at*(Details of structural member identification)*	*Grade of Concrete**	*Date of casting**	*Date of Testing*	*Age of Concrete on the date of test***	*Contact area (mm^2)*	*Weight of Specimen (Kg)*	*Load in KN*	*Compressive Strength in N/mm^2*	*Remarks*
1.	Drain Concrete	M_{20}	24.10.2013	21.11.2013	28 days	22500	8.090	480	21.33	Pass
2.		"	"	"	"	"	7.840	390	17.33	Fail
3.		"	"	"	"	"	7.860	430	19.11	Fail

1 N/Sq.mm = 10Kg/Sq.cm.(Approx.)
*As Furnished by the Customer
**Based on the data furnished by the Customer
Note: A minimum of three cube specimens shall be supplied for testing as per IS:516-1959

for **KARNATAKA TEST HOUSE PVT. LTD.**

KARNATAKA TEST HOUSE PVT. LTD. BANGALORE-54

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